

### **ABSTRACT OF THE DISCLOSURE**

A circuit and method for detecting cardiac rhythm abnormalities employ unipolar signals respectively obtained from a cardiac lead having a tip at which a number of separate electrodes are disposed, the electrodes being simultaneously in contact with cardiac tissue. The respective unipolar signals which are obtained from the multiple electrodes exhibit a time relationship relative to each other, and this time relationship is analyzed to determine whether a cardiac rhythm abnormality is present or one or more of the unipolar signals is compared to a template which is known to represent a cardiac abnormality. Analysis of the time relation is undertaken by determining the absolute value of a time offset between any two of the unipolar signals, or by correlating any two of the unipolar signals.